



SUSTAINABLE
AEROSPACE
TOGETHER



2023 Sustainability Spotlight
UK and Ireland

Leadership Message

Sustainable Aerospace Together, UK and Ireland

Boeing is woven into the fabric of the aerospace industry in the UK and Ireland. This includes a deep collaboration with the UK government, research partnerships with six universities, support for charitable organisations across the region, and a diverse network of over 650 domestic suppliers.

We are proud of our achievements over the past year and the partnerships we've built in support of accelerating sustainable aviation, which are showcased in this spotlight. Boeing UK is a member of the UK government's Jet Zero Council supporting the government's targets to cut aviation emissions to net zero by 2050. We are working on implementing and scaling sustainable aviation fuel (SAF) to help build confidence in its development and production right here in the UK and Ireland.

We are delighted to be part of a Virgin Atlantic-led team, alongside partners Rolls-Royce, the University of Sheffield, Imperial College London and others, that secured UK government funding to operate the first 100% SAF transatlantic flight, due to take place on a Boeing 787 Dreamliner later this year. This will help advance our commitment to have all of our commercial aircraft compatible with 100% SAF by 2030.

We recognise that climate change is creating new challenges for our armed forces around the world. As militaries work towards a reduction in emissions, we are confident that a

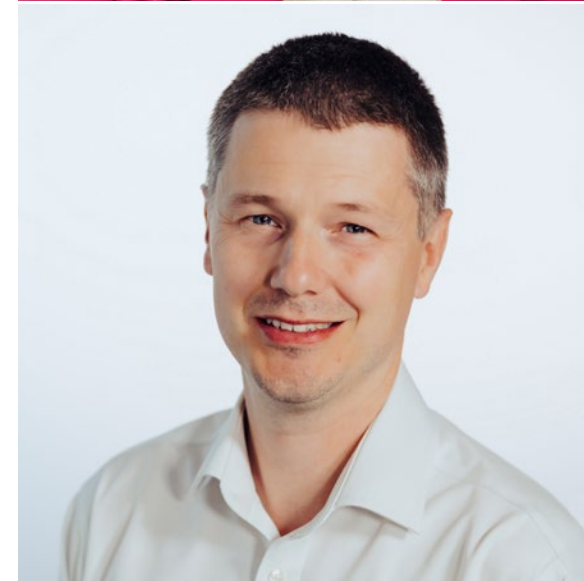
more sustainable, lower-cost, energy-efficient defence enterprise is a more operationally efficient one. We have already seen the Red Arrows and the strategic airlift fleet for the Royal Air Force (RAF) adopt our digital aviation tools to support their ambitions for a "paperless cockpit," with a focus on operational efficiency and fuel optimisation.

Our commitment to driving social progress, inclusion and transparent governance is reflected in the activities undertaken by our employees in the communities in which we work, many of which you can read about in this spotlight. We are also particularly proud of our efforts to increase diversity and engagement in science, technology, engineering and maths (STEM) and aerospace.

The journey to net zero is broader than one organisation and industry. We are partnering with our customers, suppliers, not-for-profits, academia as well as businesses to find solutions to decarbonise global aviation and create a more sustainable aerospace industry — together.

Maria Laine
President of Boeing UK, Ireland and Nordics

Steven Gillard
Regional Sustainability Director, UK, Ireland,
Middle East and International Defence



2022 Highlights

January



Boeing UK and Ireland STEM Ambassador Network was launched.

March



UK Gender Pay Gap Report was released.

April



UK's first Newton Flight Academy was launched in Glasgow, Scotland.



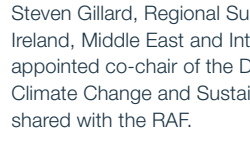
UK-based employee network REACH supported local communities on Earth Day.

April – June



Battle of the Buildings, a company-wide internal conservation competition, was held at sites across the UK and Ireland.

May



Steven Gillard, Regional Sustainability Director, UK, Ireland, Middle East and International Defence was appointed co-chair of the Defence Supplier Forum's Climate Change and Sustainability Aviation Group shared with the RAF.



Mobile Newton Room was opened in Ireland at Dublin City University.

June



Partnered with Leonard Cheshire on a pilot internship programme to increase awareness of disabilities amongst employees.

July



Annual Flying Scholarships for Disabled People wings presentation ceremony was held at the Royal International Air Tattoo (RIAT).



Boeing's Cascade Climate Impact Model was launched at Farnborough Airshow.



Debuted future flight concepts at Farnborough Airshow.



Became a founding member of the Energy Innovation Centre at the University of Sheffield.



Announced a research partnership with the University of Cambridge to further advance the Aviation Impact Accelerator programme.

October



Partnered with Ambitious about Autism on a pilot internship programme to increase awareness of disabilities amongst employees.

November



Hosted Girls in Engineering event at Gatwick Training Campus with Royal Aeronautical Society (RAeS).

December

Hosted International Air Transport Association (IATA) SAF roundtable with UK Members of Parliament (MPs).



Became part of a team led by Virgin Atlantic that won Department for Transport funding for the world's first 100% SAF transatlantic flight.

February 2023



Hosted seventh Jet Zero Council meeting in support of the Jet Zero Strategy and the UK's commitment to construct five SAF plants by 2025.

Approach & Governance

Company Profile

UK

Boeing has partnered with the UK since before World War II. Over the course of a relationship that spans more than 80 years, we have grown to a highly skilled workforce of over 4,000¹ people across 30 locations.

More than 400 Boeing aircraft are operated in the UK, which includes over 120 Boeing Chinook, Apache, Poseidon and C-17 aircraft that provide battle-winning, lifesaving capability to the UK armed forces. We have also established a conversion facility with supplier STS Aviation to conduct heavy modification work in Birmingham to convert 737s into the RAF's Future Airborne Early Warning and Control fleet.

More than £300 million direct investment has been made in the UK by Boeing since 2015, including three major infrastructure projects, helping to grow the local aerospace sector, create jobs and drive innovation for mutual benefit. This includes £50 million at RAF Lossiemouth, £40 million on the company's first European factory in Sheffield and £88 million for a new hangar and freighter conversion facility at London Gatwick. Read more about [Boeing in the UK](#).

Ireland

Boeing has two offices in Dublin and employs around 90 people, with a focus on aircraft leasing and renting. Boeing is involved in STEM outreach in Ireland and supported the opening of a mobile Newton Room at Dublin City University in May 2022, a project that engages students to learn STEM through aviation-based activities. In November 2022, Boeing announced a collaboration with Irish aircraft-leasing company Avolon to explore the feasibility of a SAF production facility in Ireland.

1. As of October 2023.



£12.8B+ spent with the UK supply chain since 2015

£300M direct investments into the UK since 2015

850+ UK companies attended Boeing supply chain events since 2016

400+ commercial and defence aircraft in UK fleets



£100M+ invested in UK innovation since 2015

£11M spent on community, higher education, STEM and veteran support projects since 2015

400+ early careers participants since 2016

6 strategic long-term partnerships with universities across England and Scotland

Sustainability Governance in the UK

Sustainability is rooted in our values. We are committed to transparency, and we continue to embed sustainable practices across our businesses. The [Boeing 2023 Sustainability Report](#) contains more information on Boeing's corporate governance, reporting and risk management.

The continued growth of Boeing in the UK and Ireland over recent years highlighted an opportunity to further invest in our regional sustainability function and develop a local governance structure to create and drive local initiatives that support our commitments in the UK and Ireland as well as Boeing's global 2030 sustainability goals.

The UK and Ireland Sustainability Council was set up in early 2022. Its members include business unit and functional leaders, a steering committee and subject matter experts.

The Council meets on a regular basis and provides a platform to share industry best practice on sustainability, and importantly identify and develop initiatives to help drive sustainability across our business. The Council has also included a number of guest speakers from our customers and supply chain to share industry best practice on sustainability. The UK and Ireland Sustainability Council demonstrates an important step forward in the continual development of a formal and localised governance structure, which directly supports UK and Ireland sustainability activity whilst ensuring alignment with global priorities and goals.

Read more about [Boeing's company profile and values](#).

People

Boeing is laying strong foundations to grow and develop a diverse pipeline of aerospace talent at all levels. Our professional development programmes provide education and training opportunities for current and future employees. We also take a holistic approach to employee safety and overall well-being, including physical, financial and mental health components at work and at home. Looking back at the year, we have undertaken important initiatives in the UK and Ireland across employee well-being, talent development and inclusion.

Employee Well-Being

Boeing continues to have a strong focus on well-being for employees, including free regular health checks, private health care options, access to free well-being coaching and a confidential service offering counselling and professional support with stress management, relationships, work-life balance, grief, loss and more. Some of our 2022 highlights include:

- 65+ **Mental Health Allies** were trained to improve visibility and access to resources for emotional health in the programme's inaugural year in the UK.
- Deployed leading technology-driven platforms such as **Total Brain** to support mental well-being and **BetterUp** to develop managers as coaches.

Leadership Next Programme

Leadership Next (LX) is Boeing's emerging leadership development programme that includes training, assessments, group coaching, peer and executive mentorship and high-impact projects. In 2022, the UK had the highest number of participants in the two-year leadership programme, compared to all other countries outside of the United States.

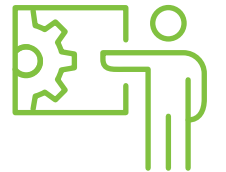
Aircraft Maintenance Technician Apprentice, Ruth, works on an aircraft at Boeing's Maintenance, Repair and Operations at London Gatwick Airport. (Boeing photo)

Professional Development, Education and Learning

Developing our people is as important to us as delivering quality products and services to our customers. Boeing continues to build a skilled and diverse workforce through early careers schemes that include internships, apprenticeships and graduate programmes, as well as supporting the development of leaders through a best in class leadership development programme.

17% increase in early career (interns, graduates, apprentices) intake in 2022 over 2021

100% of apprentices and graduates transitioned into the business



Global Equity, Diversity and Inclusion

Boeing UK and Ireland continues to progress towards meeting representation and inclusion commitments. Our three strategic pillars “Equity for All,” “Team of All” and “Inclusion by All” inform our diversity goals and key programmes. Find out more about our commitments in the [Boeing Global Equity Diversity and Inclusion \(GEDI\) Report 2023](#).

In 2022:

- We became signatories of the Women in Defence Charter and the Women in Aviation and Aerospace Charter, with a goal to reach 30% women employees in Boeing in the UK by 2030.
- We became a [Disability Confident Committed employer](#) in the UK.
- We launched two new Business Resource Groups (employee-led associations designed to further personal and professional development) in the UK and Ireland¹ for Black and Asian colleagues, increasing the total number of groups to eight.
- Our gender pay gap continued to reduce, and we remain committed to further narrowing the gap through multifaceted action in the UK. More information can be found in the [2023 UK Gender Pay Gap Report](#).

66% of
interns were women



24% of
apprentices identified
as women or nonbinary



44% of our graduate
hires were women

A Tale of Two Internships

Boeing partnered with Leonard Cheshire and Ambitious about Autism to pilot two internship programmes that placed participants with disabilities on a team within Boeing UK. The partnerships increased awareness and understanding of autism and other disabilities amongst employees, while also providing a dedicated and experienced support team in the preparation, delivery and conclusion of hiring interns.

The partnership will continue throughout 2023 to increase the number of internships following positive feedback from both interns and hiring managers.



Disabled Flying Scholarship Programme

Boeing has proudly sponsored the Flying Scholarships for Disabled People (FSDP) in the UK for the third year, a charity that offers disabled adults life-changing aviation experiences. According to FSDP, “the aim of this scholarship is to both challenge and inspire; building up confidence, self-esteem and future aspirations.” Boeing sponsors a flying scholar every year.



Flying Scholarships
For Disabled People

1983 FORTY YEARS 2023



Maren Rawlinson, GEDI Specialist, with the FSDP scholars at the Royal International Air Tattoo (RIAT). (Maren Rawlinson photo)

1. Except Boeing Reserves¹ and Veterans² Organisation (BRAVO), which is UK only.

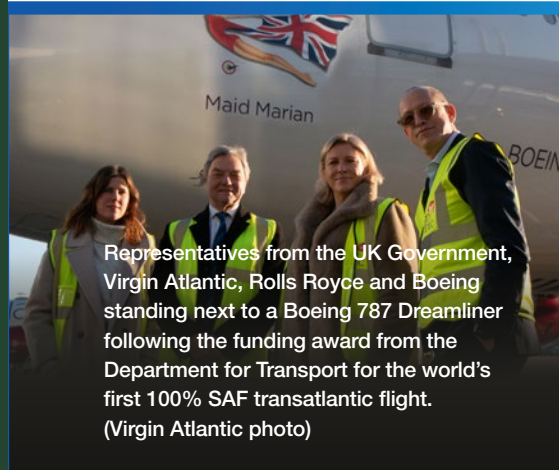
Products & Services

As a leading member of the aerospace ecosystem in the region, we support the UK government's Jet Zero Strategy and their journey to net zero. We are focused on our four key decarbonisation strategies: fleet renewal, operational efficiency, renewable energy and advanced technology. For more information on our goals related to our products and services, as well as our progress and essential partnerships that will help us achieve them, please refer to the [Boeing 2023 Sustainability Report](#).

Renewable Energy

Sustainable Aviation Fuel (SAF)

SAF is a critical innovation for the aviation industry to meet its net-zero 2050 commitment and forms part of our 2030 goals to ensure all of our commercial aeroplanes will be 100% SAF compatible. This year, we continue to make strides in SAF scaling through investing in commercial product compatibility work, supporting policy discussions, and exploring sustainability and availability of feedstocks for SAF production.



Representatives from the UK Government, Virgin Atlantic, Rolls Royce and Boeing standing next to a Boeing 787 Dreamliner following the funding award from the Department for Transport for the world's first 100% SAF transatlantic flight. (Virgin Atlantic photo)

100% SAF Transatlantic Flight

Boeing is providing technical expertise on the project, which will see a 100% SAF-powered 787 Dreamliner fly from London to New York later this year – a key step towards our goal of making our commercial aeroplanes 100% SAF compatible by 2030.

Identifying SAF Opportunities in Ireland

Boeing has collaborated with Avolon, ORIX Aviation, SFS Ireland and SkyNRG to launch a SAF feasibility study in Ireland. Learn more about our [partnership with Avolon](#).



The seventh Jet Zero Council was hosted in Boeing London offices. (Boeing photo)

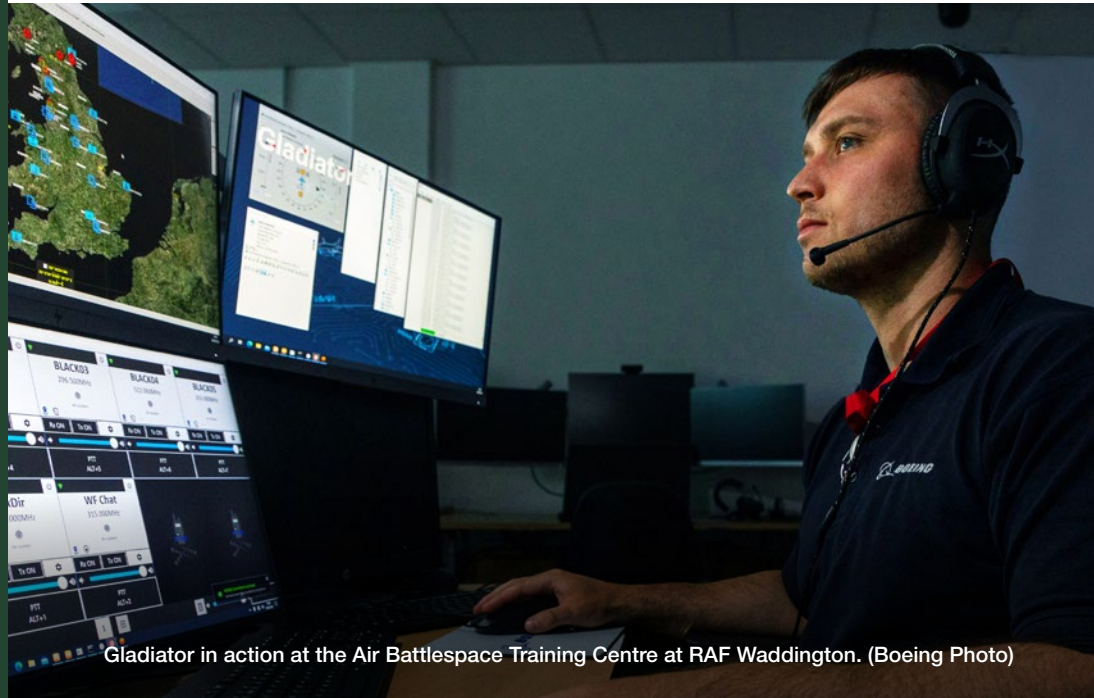
Partnerships

We know that no single company or entity can tackle the challenge of “sustainable aerospace” alone. It will be a true team sport to prevail. We continue to work with industry and the government both at a regional and global level to help accelerate the decarbonisation of our industry. In 2022, we:

- Became a **founding member of the University of Sheffield's Energy Innovation Centre (EIC)** which includes the Sustainable Aviation Fuels Innovation Centre (SAF-IC).
- Strengthened our **partnership with the University of Cambridge's Whittle Lab** and its Aviation Impact Accelerator (AIA) programme developing interactive, evidence-based models, simulations and visualisation tools for decision-makers and other partners to understand net-zero flight pathways.
- Hosted the **seventh Jet Zero Council meeting** at Boeing London offices in February 2023, further contributing to the creation of policy, investment and innovation ecosystem in support of the government's Jet Zero Strategy commitment of having five SAF plants in construction by 2025.
- Are honored to have **Steven Gillard**, Regional Sustainability Director, UK, Ireland, Middle East and International Defence, **appointed as co-chair**.

Operational Efficiency

Boeing continues to explore and develop data-driven, efficiency-led technologies that support the reduction in resource use across the life cycle of our products and services.



Gladiator in action at the Air Battlespace Training Centre at RAF Waddington. (Boeing Photo)

Gladiator Programme

Gladiator leverages the latest technology to deliver multilayered complex training in a safe, secure and resilient synthetic environment for maritime, land and air forces.

With a vision to unite multiple platforms into one virtual reality, Boeing Defence UK and the RAF developed Gladiator, a synthetic system that delivers collective training exercises in a virtual environment at RAF Waddington, to lessen the reliance on real-life training and thereby reduce carbon emissions. It represents a step-change in capability for the UK, allowing crews and ground forces from all three services, along with allies and partners, to train in a more sustainable environment.

SAFE AND SUSTAINABLE



Cascade

Boeing's Cascade Climate Impact Model debuted at Farnborough International Airshow in 2022 and was demonstrated to the Jet Zero Council members in February 2023. The tool allows the industry to visualize, for the first time, the real climate impact of each of our major paths including fleet renewal, operational efficiency, renewable energy and future aircraft introduction to inform the most impactful and effective strategies for commercial aviation to reach net zero by 2050.

Boeing also introduced the Cascade User Community, a working group that will provide feedback on new features, functionalities and application programming interfaces of which the University of Cambridge's Aviation Impact Accelerator is one of the founding members.

Learn more about [Cascade here](#).

Associate Technical Fellow, aircraft design and sustainability, Hubert Wong explores the Cascade tool at Farnborough Airshow. (Boeing photo)

Operations

In support of our goal to advance environmental stewardship efforts, Boeing subsidiaries in the UK and Ireland are committed to achieving net-zero emissions by 2050 for Scope 1 (direct e.g., company vehicles) emissions and Scope 2 (indirect e.g., purchased energy) emissions, as well as those Scope 3 (other indirect) emission categories specified by the UK Government for those subsidiaries that are major UK government contractors. This is in line with the government commitment and will be achieved in the UK and Ireland by increasing operational efficiency, transitioning from fossil fuels to renewable electricity (through direct use of renewable energy and procurement of renewable energy credits) and accelerating the use of low-emission vehicles to minimise emissions, while securing third-party-verified offsets for any remaining GHG emissions (through mechanisms which may include reforestation, peatland restoration and hydropower-based projects). Boeing UK and Ireland subsidiaries will also work with our customers to support their net-zero ambitions, including through the Defence Aviation Net Zero Charter and the Jet Zero Industry Charter.

Sustainable Operations

Conserving Resources

Boeing has implemented multiple approaches to encourage the workforce to support conservation by fostering sustainable behaviours. Employees are a source of innovation, champions of projects, and their combined actions will contribute to our progress towards our global 2030 sustainability goals.

Find more information on our programmes fostering environmental stewardship and cultural shifts across the enterprise in the [Boeing 2023 Sustainability Report](#).

Responsible Supply Chain

Boeing UK and Ireland continues to work closely with the global team to help drive a holistic approach to responsible supply chain practices. Find out more information about responsible supply chain practices in the [Boeing 2023 Sustainability Report](#).

Sustainability Supplier Highlight

In recognition of Crown Hosting’s environmental leadership, Boeing Defence UK nominated them for the Boeing Company Supplier of the Year Sustainability Award. Their passion and proactivity has led to tangible results at their data centres that underpin the Boeing Defence UK service provision to the UK Ministry of Defence, including a 62% reduction of Scope 1 emissions at one site used by Boeing, and an 85% reduction at another, over the two-year period from 1st January 2021 to 31st December 2022. Their continual focus on sustainable development has seen them achieve a “zero-to-landfill” for non-hazardous waste since 2019, significant reductions in reported carbon emissions, increased levels of biodiversity and conservation of water through the use of rainwater harvesting across their sites. Crown Hosting’s carbon reduction plan aims to achieve net-zero Scope 1, Scope 2 and Scope 3 operating emissions by 2030.



Employees at the Boeing Sheffield factory, which manufactures components for the 737. (Boeing photo)

The Environmental Case

Environmental considerations and sustainability is a condition of contract placed by the UK Ministry of Defence and their Defence Supply Chain Strategy. The compelling, comprehensive and bespoke environmental management system known as an “Environmental Case” establishes legal and other environmental obligations and importantly helps to continually improve the environmental performance of our products, systems and service by identifying, measuring and controlling to eliminate or reduce and maximise positive environmental impacts.

The Energy Star Battle of the Buildings

For the last five years, Boeing has held an annual *Battle of the Buildings*. This global internal competition encourages employees to take simple 60-second actions every day that have a positive impact on the environment and our communities. In 2022, employees across the UK and Ireland posted 4,702 actions ranging from solid waste management to saving energy and water on the competition website. Find more information on 2022 results in the [Boeing 2023 Sustainability Report](#).

Communities

We are committed to the communities in which we are proud to live and work by investing in our local areas through employee volunteering, innovative partnerships on a regional and national level and supporting programmes focused on STEM, veterans care and community development.

£3.6M spent supporting
UK and Ireland charities since 2015



350+ members currently in UK and Ireland REACH, the employee development, networking and community outreach programme

140 STEM ambassadors as part of our network as of May 2023



100+ STEM outreach events supported across the UK in 2022



Flight simulators at Glasgow Science Centre, UK. (Glasgow Science Centre photo)

Newton Rooms

Glasgow Science Centre, Scotland

Boeing supported the UK's first Newton Flight Academy at the Glasgow Science Centre that houses three state-of-the-art full-motion flight simulators.

Dublin City University, Ireland

A Mobile Newton Room opened in Ireland in May 2022 at Dublin City University. Featuring three professional flight simulator panels, it was launched to help second-level students across Ireland learn about STEM-related subjects through aviation-themed activities.

Within its first year of launch in April 2022:

3,000+ visitors including RAF and Royal Navy cadets and members of the public

1,565 school pupils visited

Teachers from 11 local authorities visited the room

Simulators have flown 7.4 times around the planet

1,619 hours of teaching have been completed



Left: Peak District Challenge for SSAFA, on Saturday, 9 July 2022. (Ian S Winthrop photo) Middle: Boeing Bristol office team spent the day at the Olveston Scout Hut clearing, tidying and planting to brighten up the area and hopefully attract more wildlife. (Alexander Walsh photo) Right: Boeing supports the Royal Academy of Engineering (RAEng) Connecting STEM Teachers programme. (RAEng Photo)

Our Heroes

Boeing helps veterans and their families after military service has ended as well as encouraging and enabling those who serve in the reserves. We have provided charitable grants to support veterans and their families to organisations such as: SSAFA, the Armed Forces Charity; The Open University Disabled Veterans Scholarship Fund; Aerobility and The Air League.

Boeing continues to support the Boeing Reserves' and Veterans' Organisation (BRAVO), an internal Business Resource Group (BRG) that connects veterans, reserves and colleagues across Boeing in the UK, providing a network to collaborate, fundraise and share experiences.

Our Homes

Boeing is working to build better, more equitable communities through corporate investments, employee engagement programmes and advocacy efforts, which include support to protect the environment around the world. To meet this goal we provide charitable grants to organisations such as: Pieta the Golddigger Trust, Outfit Moray, Aoibheann's Pink Tie and Barons Court Project.

We also continued the growth of our internal network of employees called REACH, which is instrumental in supporting our communities by helping charities, not-for-profits and community groups throughout the year. 2022 highlights included cleaning, planting and painting in Bristol and Lossiemouth Communities, "Don't Be Trashy," which is an employee development series covering a variety of sustainability-based topics, collecting Easter eggs for children's charities and local food banks, and co-ordinating donations for Ukraine.

Our Future

As a part of our STEM vision we inspire, inform and engage talent by giving them the skills and knowledge needed to make decisions about their future and help bridge the engineering skills gap. To support STEM in our communities we provided charitable grants to organisations such as: The Prince's Trust, The Royal Academy of Engineering (RAEng), Royal Aeronautical Society and the Air League.

We also established a Boeing STEM Ambassador Network in the UK, which currently has 140 ambassadors, reaching approximately 2,600 students as of May 2023. The ambassadors volunteer at primary schools and secondary schools, as well as events, to highlight the opportunities for careers in STEM and aerospace.

Learn more about our charitable grants we provide within our communities on the [Boeing UK website](#).



Boeing UK
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The Boeing Family of Reports

We are continually collecting, assessing and making available data about our company and the broader aerospace ecosystem to keep our employees, customers, communities, industry partners, investors and other stakeholders informed and engaged.

Visit boeing.co.uk to find out more about Boeing's impact in the UK and Ireland.

Sustainability Report

We share our journey towards a more sustainable aerospace future with our stakeholders, achievements and progress against our 2030 sustainability goals and continue to learn and mature our approaches, together. Learn more at boeing.com/principles/sustainability/annual-report.

Annual Report and Proxy Statement

View our Annual Report and Proxy Statement to find additional information about our financial performance and Boeing business practices. boeing.com/annual-report.

Global Equity, Diversity and Inclusion

We believe in a culture and workplace where everyone is respected, valued and inspired to reach their fullest potential. Learn more about our Global Equity, Diversity and Inclusion efforts at boeing.com/diversity.

Community Engagement

Through purposeful investments, employee engagement and thoughtful advocacy efforts, Boeing and its employees are helping build better communities worldwide. Learn more at boeing.com/community.